

nection with FIG. 16. At a next step, 1314, the Zenu™ UDI waits for an event to occur. At this stage two events can occur; a button can be clicked, or a drop file unbutton event can occur. A “button click” is described below in connection with FIGS. 17 and 18. A “drop file unbutton event” is described below in connection with FIG. 19.

[0139] FIG. 14 describes the details of a plain UDI window look and other window settings as introduced at step 1308. This process starts at a step 1402. Based on the availability of the template and theme information, a decision is made (step 1404) to determine if the “main window look” is overridden in the theme file. If YES (i.e., the theme is going to be used), a region is created according to a “main UDI window look” in the theme, as shown at a step 1406. Otherwise, information from the default template will be used to create the region, as shown at step 1408. Next, at a step 1410, the window pop-up position information is retrieved from the .ini file. In other words, the position where the Zenu™ UDI was last displayed is obtained, or a cursor relative position is determined. At a step 1412 the window is then registered as an application object with a operating system for tracking and access purposes. Thus, the operation is performed and the flow FIG. of 14 represents a “shell” of the window for the Zenu™ UDI. Next, at a step 1414, the process flows to step 1310, which is further described in connection with FIG. 15.

[0140] FIG. 15 illustrates the flow in connection with “creating buttons” as introduced at step 1310. The flow begins at a start step 1502. Steps 1504 through 1518 access the template to determine the designated number of buttons that make up the Zenu™ UDI. For example, the Zenu™ UDI of FIG. 8A comprises 12 buttons; two rows of 6 buttons each. In essence, this figure represents the creation of a small window corresponding to each button and links them together to create a Zenu™ shell. Every time a new Zenu™ UDI session is initialized, i.e., the Zenu™ UDI is launched, small windows called “child windows” corresponding to each button of the Zenu™ UDI must be created to form the UDI, as shown at a step 1504. A first button is processed as shown at a step 1506. At a step 1508, it is then determined whether the child window is a button. If YES, a UDI button is created and it is assigned a subclass as a child window, at a step 1510. Next, a pointer to the button is stored in a list for future access, as shown at a step 1512. If an additional child window is to be processed, as determined at a step 1514, the next button is retrieved, as shown at a step 1516. The process then flows back to step 1508, otherwise the flow proceeds to step 1312 as shown by step 1518. Step 1312 applies various settings to each button just created, the details of which are described in connection with FIG. 16.

[0141] FIG. 16 further illustrated the process of step 1312 for applying various settings to the buttons created in FIG. 15. Thus, the steps illustrated in FIG. 16 are performed for each button for which a region was defined in FIG. 15. The flow starts at a step 1602 and proceeds to get a first button for processing at step 1604. At a step 1606 a theme name and parent template name are set for the button. Next, at a step 1608, the button configuration string from the .ini file is set. Next, at a step 1610, an application resource is set to the UDI template file. At a step 1612, the configuration string from the button for the template file is loaded. At a step 1614, the application resource is set to the UDI windows current theme file. At step 1616, the configuration string from the

button is loaded from the theme file. At a step 1618, the theme settings string is merged with the template settings thereby overriding the values in the template setting string (i.e., theme settings are replaced by template settings).

[0142] At a step 1620, the button configuration that was loaded from the .ini file is merged with the existing string, thereby overriding values with values that originated in the .ini file. In other words, the settings that are in the .ini file are used to replace the existing settings in the configuration string. At steps 1622 through 1662, the available settings for UDI buttons (buttons are sometimes referred to as action, or click areas) that are defined in Table 1 are applied to the button. Thus, at step 1622 the “setting” is applied to the button to thereby associate Microsoft® Window Quick-launch or Favorites with the Zenu™ UDI for easy access by the user.

[0143] At a step 1624 a transparent setting can be applied to the button. Transparency allows buttons, and the like, to be visible while at the same time allowing the underlying image to be partially visible. Various known transparency techniques can be employed, as would become apparent to a person skilled in the computer graphics art. At step 1622 a resource bitmap is located, if so specified in the configuration string for the button in the theme file. If a bitmap is located, as determined at step 1628, then the button bitmap is set to the located bitmap, at a step 1630. Otherwise, the application resource is set to the UDI windows template file and the associated bitmap resource is searched for, as shown at step 1632. If a template file bitmap resource is located, as determined at a step 1634, flow proceeds to 1630. Otherwise, the button is deleted as shown at a step 1636. If the button is deleted, further buttons can be processed, as determined at a step 1638. If so, a pointer to the next button is located, at a step 1640, and flow proceeds to step 1606.

[0144] After a bitmap is determined at either of step 1628 or step 1634, it is applied at step 1630. Next, a theme specific tool tip is set at a step 1644. Then, at step 1646, a “tweak” amount is set for button positioning. At a step 1548 an “auto repeat” feature is applied to the button if so desired. At step 1650, a “check button” setting is applied to the button if so desired.

[0145] Next, at a step 1652, it is determined whether a theme specific icon is specified for the button. If so, the theme specific icon is applied to the button, at step 1654. Otherwise, flow proceeds to a step 1656 to determine whether there is a bitmap to use as an icon. If so, the icon bitmap is applied to the button at a step 1658. Otherwise, flow proceeds to a step 1660.

[0146] At step 1660 it is determined whether the “A” setting indicates that the button is to accept Quicklaunch or Favorites features. If YES, the appropriate attributes are applied to the button at a step 1662. If not, flow proceeds to step 1638 so as to process any further buttons. Once all buttons are processed, flow continues back to step 1314 as shown at a step 1642.

[0147] These collections of styles that can be applied to a button (attributes, properties, or the like, e.g., a bitmap, a font, tool tip, flyover characteristic) have a particular precedence. Such characteristics are defined in the configuration file. If no such characteristics are found in the configuration file, the theme is searched. If such a characteristic is